

4 Human Resources Management

The Issue	The Solution	The Benefit
<p>The current systems are not integrated and do not support collection of management, personnel, and payroll data on a statewide level.</p> <p>The technology is dated, the data is incomplete, duties are not appropriately separated, and the current systems do not meet the Commonwealth's business requirements.</p>	<p>Integrate the current personnel and payroll systems on a phased implementation schedule that also phases in functionality.</p> <p>Establish an HR/Payroll Enterprise Applications service bureau.</p>	<p>Eliminates the Commonwealth's biggest pain point in HR Management: double entry of personnel and payroll information.</p> <p>Establishes common data standards to support superior management reporting.</p> <p>An HR/Payroll Enterprise Applications service bureau maximizes efficiency for the Commonwealth, provides a method for separating HR and payroll functions, and offers better internal controls.</p>

The Commonwealth of Virginia was recently celebrated as one of the best managed states by The Government Performance Project.¹ Most notable was the magazine's praise for Virginia for its management of human resources, especially in the areas of training and workforce planning. The Department of Human Resources Management (DHRM) is a creative leader in managing resources and capitalizing on its agency talent to find better ways to serve the Commonwealth of Virginia. This distinguished level of commitment and services has endured many changes and despite an aging HR system infrastructure, DHRM has managed to adapt and append their legacy system with thoughtful

¹ Katherine Barrett and Richard Greene with Zach Patton and J. Michael Keeling, Grading the States 05 – The Year of Living Dangerously, Governing Magazine, February 2005.

Mid- to large-size agencies require great effort to work within the current human resource and payroll framework.

and useful functionality. The Department of Accounts (DOA) has likewise managed its current payroll system with the same dedication and thoroughness. DOA is continuously upgrading its current system to take advantage of improved functionality and to provide excellent customer service to its many clients. Notwithstanding this combined dedication, the present HR and payroll systems cannot effectively overcome their respective basic system structures and inability to fully integrate the kind of state-of-the-art HRM functionality that is expected in today's business environment.²

Like many other state governments, the Commonwealth of Virginia has agencies with a wide range of programmatic needs that affect how their daily administrative functions are conducted. Some agencies have complex organizations, with hundreds or thousands of employees in a broad span of occupations that provide an equally broad array of government services. These agencies may also have operations throughout the Commonwealth with 24/7 operating requirements. In contrast, there are smaller agencies that have more highly centralized operations, a narrower range of occupations, and operations conducted during normal business hours.

As a consequence, some agencies sufficiently manage these functions within the existing Commonwealth human resources and payroll framework, while others work within this same framework with considerably more effort, in order to properly manage their agency's basic human resources and payroll responsibilities and functions. Given that the payment of salaries and benefits is one of the Commonwealth's largest expenses, it is essential that the Commonwealth move to a human resources and payroll solution that provides all agencies with the best tools and efficiencies available.³

As part of our overall solution, Team CGI-AMS proposes to address many of these concerns with an integrated system solution that will modernize and streamline the human resources management activities. The selected solution will incorporate position management and classification, recruitment, staffing, personnel action administration, benefits administration, employee relations, payroll, leave management, and time and labor distribution. Our plan will enhance HR/payroll operations, reduce the dependence on paper processes, and

² During April-June 2005, a staff team from the Commonwealth of Virginia, IBM, and CGI-AMS designed, developed and executed Due Diligence research to gather information on 19 business functions in four business areas of the Commonwealth's Enterprise Business Architecture: administrative management, financial management, human resources management, and supply chain management, with the supporting function of application management. The team conducted a set of foundation interviews with key subject matter experts, administered electronic surveys to a sample of 46 agencies, and conducted a series of follow-up discussions with respondents. The team also used data generated by Commonwealth systems and research entities to validate survey information provided.

³ We learned in Due Diligence that the staff performing human resources management functions sees a strong interrelationship among the Enterprise Business Architecture functions of Applicant Intake and Recruiting, Evaluation, Personnel Action Processing, Position Classification and Management, Payroll, and Time and Labor Distribution. We also learned of their interests in an increased level of enterprise integration among these functions. Consequently, our Due Diligence information was gathered in line with a more integrated view of human resources and payroll operations, and our solution is designed to respond to the needs in each of the functions.

An integrated system solution will streamline human resource management, and enhance flexibility.

reduce the number of duplicative systems and processes currently in use. The implementation of the integrated solution will provide cost savings and flexibility in processes used to initiate, manage, and monitor HR and payroll actions, further reduce the hands-on reconciliation tasks by replacing multiple systems with one integrated system, and provide for a data repository for improved and comprehensive data reporting. We also propose an integrated Human Resources Enterprise Service Bureau for HR and payroll transaction processing, again to reduce the administrative burden for agencies that wish to use the Bureau's services.

Our solution is offered as a phased implementation with phased-in functionality. We believe this course of action offers two key benefits for the Commonwealth. First, project scope, budget, and timeframes can be constrained to shorten the time required to deploy the solution such that an agency can begin to receive benefit and value from the solution. Team CGI-AMS's phased implementation approach leads to a "quick success" that creates enterprise-wide momentum for deploying the solution throughout the organization.

This approach allows users to grasp the system in varying levels of complexity. End users gain the experience, expertise, and confidence to take on newer functionality after they grasp the basic principles and core competencies of the initial stage. Project team members also have the system knowledge to add functionality and sub-modules more effectively in subsequent stages. Phasing in functionality creates an environment within the organization in which the project team has the necessary skills and time to fully realize the higher level implementation goals. Users will more fully understand the system, enabling team members to focus on additional functionality, without perpetually "putting out fires" or responding to support issues. This also leads to an environment less dependent on consulting organizations, as internal staff capabilities grow.

4.1.1 As-Is Cost of Doing Business

Please see Appendix A for our calculation of the As-Is cost of doing business for all business areas.

4.2 Current Commonwealth Process Environment and Architecture

Our Due Diligence findings can be summarized into three main areas:

- The current systems are not integrated and cannot support the collection and integration of personnel and payroll data on a statewide level.
- Processing personnel and payroll transactions is an ongoing and time-consuming task requiring agencies to utilize more of their resources for these tasks rather than having these resources accomplish other value-added activities for their agencies.
- The technology is dated, the data is incomplete, duties are not appropriately separated, and the current systems do not meet the Commonwealth's business requirements.

4.2.1 Process Environment

The Department of Human Resource Management is the central human resources organization for the Commonwealth. It is responsible for the development and administration of policies and programs for the management of recruiting, employee compensation, employee benefits, training and development, workers' compensation and safety, employee relations, and workforce planning.

The Department of Accounts is responsible for the Commonwealth payroll. In addition, DOA is responsible for the financial accounting and control system for state funds; maintaining a central accounting system for all state agencies and institutions; and the checks and balances between state agencies entrusted with the collection, receipt, and disbursement of state revenues.

To support their human resources and payroll business processes, all agencies are required to use the two central systems for personnel and payroll management: the Personnel Management Information System (PMIS) administered by the Department of Human Resources Management, and the Commonwealth Integrated Personnel and Payroll System (CIPPS) administered by the Department of Accounts. Unlike many human resources and payroll systems in leading government entities, these two core systems are not integrated. As a result, most agencies are required to process each transaction twice (once in each system), to properly account for one employee transaction and to record the change. As a result of the double data entry process, there are post-processing reconciliation issues to resolve between the two systems.

Other areas of concern are related to the difficulty in obtaining management reports that are accurate and accessible. As noted in the Auditor of Public Accounts report of these systems, "This structure results in costly inefficiencies such as entering and maintaining redundant data and after-the-fact reconciliation of data. Furthermore, managers and elected officials cannot obtain complete and timely information needed to effectively manage programs and measure their level of success."⁴

To the credit of many agencies, they have adapted to these limitations in a variety of ways. For example, larger agencies have hired the necessary number of employees to manage the intricate chore of tracking employee hours to agency tasks that are reimbursable from external funding; others have implemented ancillary systems to assist in managing such tasks. Larger agencies may also utilize more personnel to manage the double data entry required by the current HR and payroll systems. In contrast to such high maintenance environments are those agencies with smaller employee populations; these units either contract with the DHRM and/or the Payroll Service Bureau (PSB) for processing their HR and payroll activities, or manage their own HR and payroll processing (which, while cumbersome, is not a major burden to the agency).

DHRM and DOA have worked resourcefully over the past few years to develop manual and automated processes to integrate the separate systems and have provided tools for the agencies to use to facilitate the movement of data between

⁴ Special Review of Payroll and Human Resources Systems, October 2004, Auditor of Public Accounts.

There is substantial variation among agencies in the types of systems and business processes used.

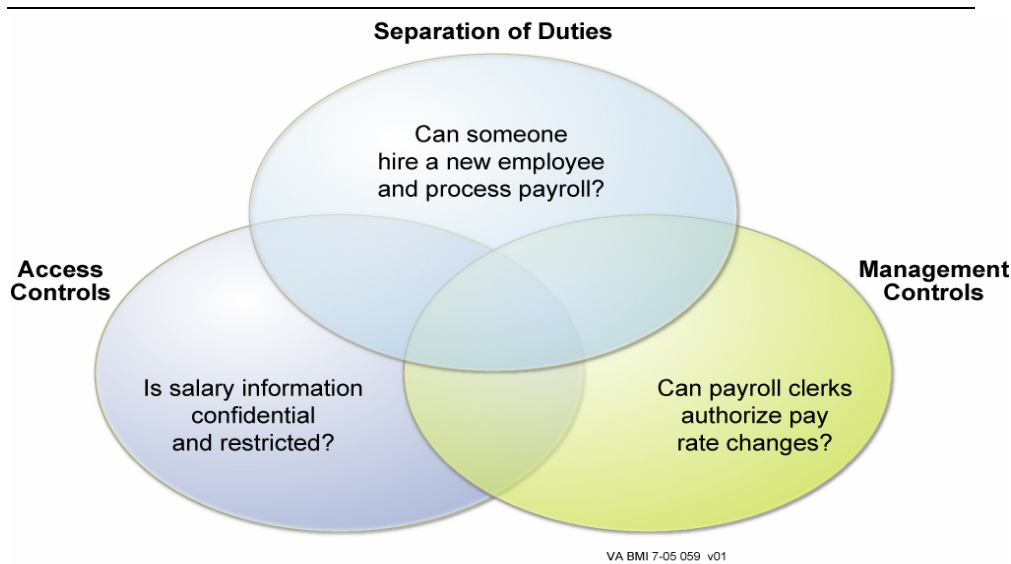
the systems. In spite of this effort, a significant gap exists in the core integration of HR and payroll systems and data.

This lack of integration is compounded through the ancillary systems development occurring in agencies. When Commonwealth agencies have developed and funded their own supporting systems and solutions, they have done so with very little collaboration with other agencies and systems. As a result, there is substantial variation among agencies in the types of systems and business processes used to interface with the core human resources and payroll systems.

Not surprisingly, the Due Diligence HRM survey results strongly substantiate that the current non-integrated system environment places a significant workload burden on agencies. This interest in an integrated human resources and payroll system was consistent in respondents across agency size or complexity.

The Auditor of Public Accounts, in a special review of the Commonwealth's personnel and payroll systems in October 2004, identifies the lack of integration as a significant risk to the Commonwealth because "critical internal controls associated with integrated payroll and human resources systems are missing." As shown in Exhibit 4-1, these critical internal controls include the separation of duties between HR and payroll: can someone process the hire of an employee and also process the payroll for the same employee? Access controls: is salary information confidential and restricted? Management controls: can payroll clerks authorize pay rate changes? Within an integrated system environment, these controls can be managed by establishing operator security classes and electronic workflows and can significantly limit exposure to unauthorized or unlawful activities.

Exhibit 4-1 Critical HR and Payroll Audit and Control Areas



Agencies have invested in a wide variety of applications to augment the core HR and Payroll systems.

The Due Diligence survey identified a wide array of systems that are currently used by state agencies to augment the core Commonwealth human resources and payroll systems, as shown in Exhibit 4-2.

Exhibit 4-2 HRM Systems Currently in Use

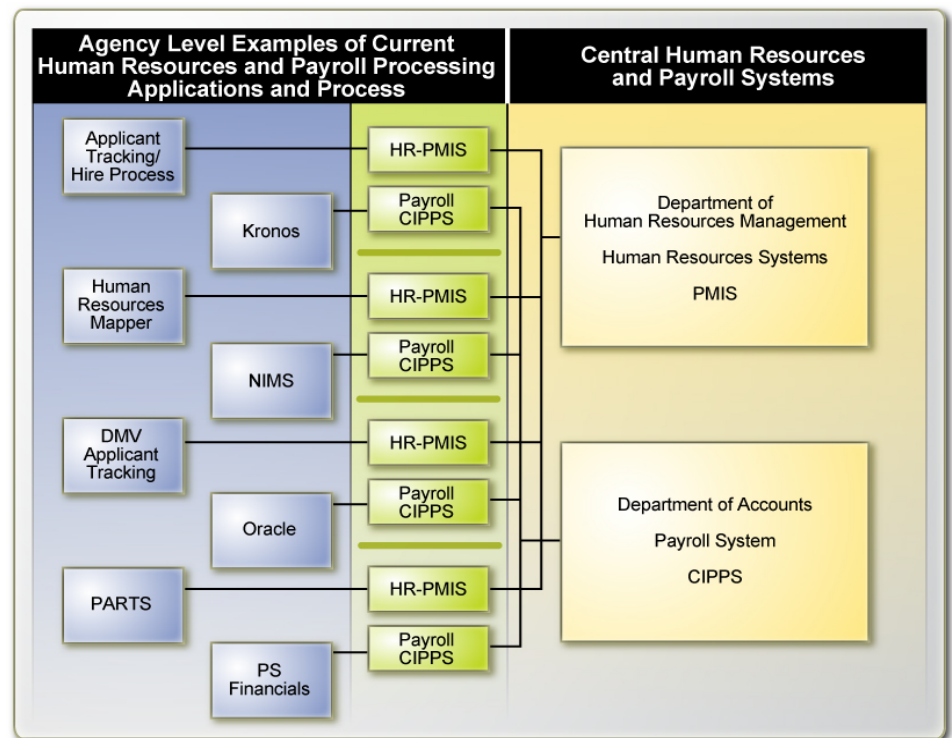
Application Name	Technology	Statewide Application	Custom built application
Human Resources	Java	No	Yes
Incident Based Reporting	VB	No	No
Time Keeping	Java	No	Yes
AESIS – Enrollment Certification	MS Access	No	Yes
Applicant Tracking System (ATS)	MS Access	No	Yes
Local Employee Tracking System (LETS)	MS Access	No	Yes
HRIS – Human Resource Tracking System	MS Access	No	Yes
Employee Phone Directory	Visual Basic/Access	No	Yes
HR Profile	Visual Basic/Access	No	Yes
Applicant Tracking	Oracle	No	Customized to Agency
Time and Labor	Oracle	No	Customized to Agency
PeopleSoft 8.1 (Applicant Intake and Tracking)	PeopleTools 8.2, Oracle, Crystal 8.5, WebLogic 5.0, Net Express 2.0	No	No
PeopleSoft 8.2 (Time and Labor)	PeopleTools 8.2, Oracle, Crystal 8.5, WebLogic 5.0, Net Express 2.0	No	No
Human Resources / Position Control	PowerBuilder, SQL Server, MS Access	No	Yes
EEO Tracking	SQL Server	No	Yes
Applicant Tracking	Microsoft Access	No	Yes
HR Interface – Application allows for flexible reporting on biweekly PMIS downloads in addition to other functions as follows: Standard classified/P-14 reporting; Applicant tracking; Alternate work schedule reporting; Employee Work Plans EWP ratings; Performance Plan tracking	asp, Windows 2000 Server/Oracle	No	Yes
Online State Application – Allows internal and external customers to apply for Department of Motor Vehicles (DMV) jobs via the Internet	asp, Windows 2000 Server/Oracle	No	Yes
Applicant Tracking and Employee Training	MS Access	No	Yes
Applicant Tracking (vacant position	HP/Image/Power	No	Yes

Application Name	Technology	Statewide Application	Custom built application
/ hire process)	house		
EEO (Equal Employment Opportunity)	HP/Image/Power house	No	Yes
HRS (employee information)	HP/Image/Power house	No	Yes
Payroll (employee pay)	HP/Image/Power house	No	Yes
Resource Directory	Server/SQL/VB	No	Yes
HRM Track State and local position and applicant tracking	MS Access	No	Yes
LETS – COTS Local Employer Tracking System	Oracle	No	No
Recruitment	MS Access	No	Yes
Time and Labor	Kronos – no version given	No	Yes
RVD-Representative Veterans Database	MS Access 2000/2003	No	Yes
Veterans Database-State Approving Agency	MS Access	No	Yes
Human Resources		No	Yes
Kronos Timekeeping		No	No
Human Resources & Tracking System	SQL Server 2000, MS Access 2002	No	Yes
KRONOS	SQL Server 2000	No	No
Time and Labor	KRONOS	No	Yes
Inmate Payroll	COBOL	No	Yes
Applicant Tracking	Oracle	No	Yes
Action Tracking System–track resource request, etc., during declared emergencies	MS Access originally, converted to SQL Server	No	Yes
Rolodex – Contact information	MS Access	No	Yes
HR reporting – Uses CIPPS, PMIS & internally maintained files to provide HR reports that are not otherwise available	Cobol, Easytrieve	No	Yes
Time & Leave Record keeping – Captures timesheet data used by the State Employment Security Agency (SESA) grants management accounting system	C++	No	Yes
Virginia Department of Health (VDH) F&A System/Oracle Database	Oracle	No	Yes
Time and Labor – No version given	PeopleSoft	No	Yes

Application Name	Technology	Statewide Application	Custom built application
Budget & Resource Forecasting (CSS)	Oracle iDS, Arpeggio, PL/SQL, SQL Loader, IBM Cobol, JCL	No	Yes
Personnel System	Oracle iDS (Forms, Reports, Queries), VS.Net 2003 / Oracle 9i / VB.NET, PL/SQL	No	Yes
HR – Human Resource Management	Mapper	No	Yes
LAUD – Leave Audit	Mapper	No	Yes
OTP – Overtime Payroll	Mapper	No	Yes
WAGE – Tracks wage employees information and time	Mapper	No	Yes
DBPoster	MS Access	No	Yes
HR Dbase	MS Access/SQL	No	Yes
Sup Leave Dbase	MS Access	No	Yes
TMKP-OTST	MS Access	No	Yes

Exhibit 4-3 presents a depiction of the current HR and payroll processing environment.

Exhibit 4-3 Current HR and Payroll Operating Environment



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This highly diverse and agency-centric environment has emerged in part because the central systems do not support the overall business requirements of the agencies.

Both the Department of Human Resources Management (DHRM) and the Department of Accounts (DOA) have worked resourcefully to integrate the separate systems. Despite this effort, there continues to be a significant gap in the core integration of human resources and payroll systems.

- **General process flows and/or decompositions, including starting and ending points.** The current Human Resource Management processes in the Commonwealth are supported by PMIS and CIPPS. A variety of other agency-based ancillary systems also exist to augment agencies' abilities to properly account for and enter transactions. See Appendix B for business decomposition graphics for each of the six business functions in Human Resource Management.
- **Variances, blockages, fragmentations.** Over the past 25 years, many agency-specific or decentralized applications have been procured or developed to assist agencies in managing the HR and Payroll functions. Many of these applications were custom developed by agency employees using commercially available tools such as Microsoft Access and Excel; a few are legacy applications that require maintenance of outdated technologies; and some are state-of-the-art applications. These ancillary systems track details such as time and labor reporting, and wage employees who are paid from the payroll system but not included in the personnel system. All were developed to assist agencies in effectively managing their human resources and payroll operations.
- **Points of process intersection, integration, and conflict.** PMIS and CIPPS utilize different programming languages and database software products and therefore the systems are not easily interfaced and cannot be integrated; however, there is some full integration or interface between certain critical systems such as between CIPPS and CARS (the Commonwealth's central accounting system). As mentioned previously, agencies have developed or implemented these tools to lessen their HRM workload such as utilizing an online application that integrates into the agency's Oracle HR module, which eliminates re-keying the information and automatically generates mailing labels for notification to applicants. Other examples exist with those agencies that have built customized agency specific applications and have internally integrated these applications to meet agency specific reporting requirements.
- **Controls and points of redundancies.** As a result of the two system (HR and Payroll systems) data entry points for agencies, there is no systematic means to ensure that the proper separation of duties between the personnel functions and the payroll functions are maintained at the agency level. In addition, the State Auditor's report also noted that "payroll operators are responsible for entering all data into CIPPS, including a certain degree of personnel information necessary to establish new employees and process payroll. Consequently, there is not always an adequate separation of duties between payroll and personnel data entry in CIPPS. This lack of separation of duties may allow payroll personnel to establish and pay employees, thus increasing the risk of fraudulent payments and the establishment of ghost employees. The primary points of redundancy exist in the double data entry required to effect one transaction related to a pay change. According to DHRM's AHRS Periodicals from January 2004 to December 2004, 26,079 transactions were processed in PMIS that were related to pay. The same numbers of transactions, therefore, were required to be entered into the payroll system (CIPPS) in order for the payroll change to take effect. These transaction numbers do not include new hires or terminations, which also

require a transaction to be entered in both systems to effect one employee change.

- **Duplication of effort and data.** As noted above, the duplication of effort and data that surrounds personnel and payroll transaction processing comes at a significant cost to the Commonwealth. An integrated human resources and payroll system would cut in half and/or significantly reduce the time spent by agencies processing personnel and payroll transactions. In addition, the current HR and payroll reconciliation issues that now exist as a result of the data processing errors that occur when entering the same transaction data into two systems would no longer be present, and would further reduce the effort spent on such activities.
- **System instances and interfaces.** As administrators of the central systems, DHRM and DOA have developed processes and tools for the interchange of some data between the systems. To enhance user functionality, DOA has augmented CIPPS with user tools such as CIPPS/FINDS, which provides data downloads for analysis, Payline, a web-based database of payment information, the Payroll Audit Tool (PAT), which uses data downloaded from CIPPS/FINDS, and a sub-system, CIPPS-Leave, that agencies may use to track employee leave balances. Recently, DOA initiated an effort with DHRM to utilize the transaction log to automatically update CIPPS with changes made in PMIS for those limited data elements shared between the two systems. This automation should be completed in the fall of 2005.
- **Process orientation (centralized, distributed, combination, etc).** The Commonwealth has several process models that provide agencies with the flexibility to choose the process model that best fits the needs of the agency, as shown in Exhibit 4-4.

Exhibit 4-4 Commonwealth HR/Payroll Process Models

Process Orientation 1	<ul style="list-style-type: none"> ▪ Agency HR function managed by the DHRM HR Service Bureau (fee-based). Primary HR system output DHRM-PMIS. ▪ Agency Payroll function managed by the DOA-Payroll Service Bureau (fee-based). Primary payroll system output DOA-CIPPS.
Process Orientation 2	<ul style="list-style-type: none"> ▪ Agency manages its own HR function. HR data entry at agency level, primary HR system output DHRM PMIS. ▪ Agency Payroll function managed by the DOA Payroll Service bureau (fee-based). Primary payroll system output DOA-CIPPS.
Process Orientation 3	<ul style="list-style-type: none"> ▪ Agency manages its own HR function. HR data entry at agency level, primary HR system output DHRM PMIS. ▪ Agency manages its own Payroll function. Payroll data entry at agency level, primary payroll system output DOA CIPPS.

Other variations of the above models do exist, in that several agencies process HR and Payroll transactions as a courtesy to other agencies, with no fees assessed for this service.

- **In-sourcing, out-sourcing, co-sourcing arrangements.** DHRM and DOA each maintain a fee-based service bureau that is open to any agency. Currently, the Human Resources Service Bureau provides a full range of HR services to 11 agencies including DHRM, covering approximately 600 Commonwealth employees. The DOA Payroll Service Bureau provides full payroll services for approximately 6,300 employees across 37 agencies. In addition, other non-fee HR/payroll assistance exists: for example, the Office of the Secretary of Administration provides a non-fee based service that combines HR and payroll processing. It services the Governor and Lt. Governor's offices, nine Secretariat offices, and four small offices with approximately 150 employees. Combined, all service bureaus, or other service assisted operations, take care of less than six percent of the Commonwealth's Executive Branch employee population.
- **Legal considerations.** Certain agencies in the Executive Branch or other Branches are exempt from the provisions of the Personnel Act, such as the State Corporation Commission and the Virginia Workers' Compensation Commission. Team CGI-AMS will fully evaluate any legal constraints as required.

4.2.2 Strengths and Weaknesses Review

Respondents to the Due Diligence survey wanted to ensure that the business of the agency could be performed without impediment.

Current system strengths. Respondents to the Due Diligence survey endorsed an agency's ability to exercise authority and make decisions to ensure that the business of the agency could be performed without impediment. This observation highlights the self-governing nature of Commonwealth agencies. Many agencies also valued the knowledge and experience of the DHRM and DOA staffs (and also those within their agencies), whom they could call upon for subject matter expertise.

As expected, agencies with smaller employee populations, and less complex payroll issues, or who were using the HR or Payroll Service Bureau s found many functional area strengths. This is likely because the overall volume of personnel and payroll transactions are less burdensome to these agencies than to an agency with a large employee population and with significant numbers of wage employees. Interestingly, large agencies also noted these same strengths, but were often referring to their internal resources such as the personnel who support their agency's HR and payroll operations, additional agency based systems, or processes put into place to facilitate the core human resources and payroll systems. Results are highlighted in Exhibit 4-5.

Exhibit 4-5 Identified HRM Strengths, Due Diligence Survey

Strengths	Comments
Consistency – The process is applied in the same way across an enterprise by individual users and the system provides the same results for the same transaction every time.	<p>"Centralized process provides consistency"</p> <p>"A consistent screening process that is clearly documented"</p> <p>"The selection process is administered, scored, evaluated and interpreted in a uniform manner"</p> <p>"Consistency in process and practice application"</p>

Strengths	Comments
Defensible – The process and the data generated fit both the letter and the interpretation of the law and leave an audit trail that does not put the Commonwealth in a situation where litigation could be lost.	<p>"Defensible – well documented"</p> <p>"Easily understandable and defensible screening criteria"</p> <p>"Ensures internal equity and alignment"</p> <p>"Is legally defensible"</p>
Compliance/Controls – The processes and systems used have appropriate controls and enforce compliance with federal, Commonwealth, and agency laws, policies, procedures, and guidelines.	<p>"Automated Recruitment & Selection forms are in use – system provides consistency & compliance: provides EEO data"</p> <p>"Ensures compliance with state and agency policies and procedures"</p> <p>"Very strong written documentation on policies and procedures"</p> <p>"Checks and balances are in place – HR submits changes, DOA processes, and DPOR finance certifies"</p>
Flexibility – The processes and systems in use permit agencies to adapt and change to fit differing needs to execute their missions.	<p>"Tailored"</p> <p>"Flexible and efficient"</p> <p>"Recognizes that one size does not fit all"</p> <p>"Ability to configure automated timekeeping system locally allows us to adjust payroll process to meet changing HR needs. Example, new special rate for unit 1 to address retention."</p>
Decentralized/local control – Processes and systems permit the delegation of authority and decision-making to the appropriate level to ensure that the business of the agency can be performed without obstruction.	<p>"Decentralized authority allows actions to be taken without undue delay"</p> <p>"Decentralized to the point that the analysis is fairly autonomous in terms of classification"</p> <p>"Automated software permits decentralized decision-making"</p> <p>"Decentralized Processing"</p>
Experienced/knowledgeable staff – The people supporting the processes and systems bring sufficient expertise to the Commonwealth to efficiently complete transactions	<p>"Knowledgeable, experienced staff"</p> <p>"HR Staff have detailed knowledge of agency business and work to be done by positions"</p> <p>"Knowledge of Agency business practices"</p> <p>"Dedicated experienced staff who understand the system and reporting requirements"</p>
Timeliness of processes – Processes and systems support the rapid and efficient execution of transactions	<p>"Fast turnaround for customers"</p> <p>"Process is streamlined"</p> <p>"Unencumbered process"</p> <p>"Easy and quick – very little falls through the cracks – appropriate staff notified – quick turnaround time"</p>
Accuracy – Processes and systems ensure the data collected is accurate and minimizes potential for user error	<p>"Accurate"</p> <p>"Automated software permits accurate classification by non-HR staff"</p> <p>"Automated forms have built in QA"</p> <p>"Automated timekeeping system ensures efficient and accurate calculation of exceptions to regular payments, such as OT, shift differential, LWOP, VSDP, W/C, on-call, etc."</p>

In general, for every employee transaction, there are a minimum of two different system entries and an accompanying reconciliation—doubling the level of effort over what it would be if there were one integrated system.

Current System Weakness. The weakness that survey respondents most often noted was the lack of a fully integrated human resource management system, as shown in Exhibit 4-6. Respondents also indicated that they wanted one system that would incorporate all employees (wage and classified) into one human resources, payroll, and time and labor system.

Exhibit 4-6 Identified HRM Weaknesses, Due Diligence Survey

Weaknesses	Comments and Recommendations
Lack of system integration - The lack of an integrated human resources and payroll system, or an established interface, requires most employee transactions to be keyed twice. In addition, 20 of the 36 agencies surveyed used some form of software to track daily employee time and labor costs, adding another application and processing layer.	<p>"Integrated Human Resource Information System that would work across all HR business functions"</p> <p>"Personnel info system integrated with payroll"</p> <p>"Ability to get info needed in format and time line needed without having to maintain own systems, resulting in double or triple entry"</p> <p>"Eliminate multiple entries of data to prevent/decrease errors"</p> <p>"Ability to reduce duplication of data entry by population of data simultaneously"</p>
Lack of automated processes - Need for electronic workflows for applicant intake and tracking, and for manager approvals and signatures for employee leave slip submissions and time sheet processing.	<p>"Automation of applicant tracking"</p> <p>"On-line paperless forms and electronic signatures"</p> <p>"Have automated leave submissions to eliminate paper leave forms"</p> <p>"Automated position tracking/control for budgeting purposes"</p> <p>"On-line routing capability"</p>
Need to improve accuracy of data, improve access to data, and improve reporting - Although the current environment's reporting mechanism is a good construct, the data is not reliable and does not reflect the entire employee base. In some cases, users are either unaware that desired data exists or may not be using it.	<p>"More user friendly report production"</p> <p>"Personnel Information System that includes Wage [employees] as well as classified"</p> <p>"Ability to produce automated reports from PMIS on transactions processed"</p> <p>"Need system for better and easier report generation"</p> <p>"Allow a system to be able to track an employee's history from their original hire date - listing every position held within the state, all salary changes, role changes and any personnel action taken"</p>
Need to improve end-user system experience and increase self-service capability for employees - More user-friendly, intuitive Commonwealth HR and payroll applications that support better employee self-service.	<p>"On-line acceptance of VA-4, W4, Deferred Comp, Banking with security features"</p> <p>"User friendly/intuitive/logical input process and reporting"</p> <p>"Allow employees accessibility to their own records in order to verify personal information"</p> <p>"Ability to back out "certain" transactional data w/o seeking assistance from central HR agency"</p>

Weaknesses	Comments and Recommendations
Need to reduce paper files – Eliminate duplicative paper processes wherever possible and provide the ability to scan documents and electronically store them.	<p>"We need a method to automate personnel records instead of hard copies. Space is an issue"</p> <p>"Automated imaging to allow more paperless systems"</p> <p>"Get away from paper notification to electronic notification"</p> <p>"Integrate HR with Payroll so we have less paper and better security"</p> <p>"Process is paper intense, could be automated"</p> <p>"Should provide for electronic submittal of information"</p> <p>"On-line submission of evaluations"</p>

4.3 Reengineering and Re-solutioning Opportunities

Team CGI-AMS envisions working with the Commonwealth to select a new system that supports a significant increase in human resources and payroll automation and integration, has richer and far more complete functionality, and leverages new technology. We intend to work with the Commonwealth to enhance HR/payroll processes toward a model that is a "best fit" for the Commonwealth, enhance operational efficiencies to cut costs and improve productivity, reduce paperwork, eliminate redundant information systems, eliminate non-value added work, and provide timely, high quality information necessary to make sound human resource decisions.

4.3.1 Process Recommendation

We recommend that the Commonwealth take on Human Resource Management (HRM) change through implementation of an integrated human resources and payroll system that will be deployed in a phased approach.

Team CGI-AMS recognizes there are several critical HRM system integration points within the HRM tower. We will address the most critical integration point first, which is the integration between the human resources system and payroll system. The next major system integration point is between the payroll and the time and labor distribution function, the third critical point is between human resources and applicant intake and recruitment. Exhibit 4-7 details the components involved in each stage.

Exhibit 4-7 Critical HRM System Integration Components

Stage	Integration
I	HR and Payroll Integration <ul style="list-style-type: none"> Establish the base employee record and associated fundamental HR components such as the employee position through position management with appropriate alignment and integration with budget and position control. Establish base benefit record, compensation, and leave management components. Establish employee pay profile that includes setup of deductions, tax withholdings, voluntary and involuntary deductions.
II	Payroll and Time/Labor Distribution Integration <ul style="list-style-type: none"> Link employee time worked to associated project/program, payroll, and leave management. Integrate with cost accounting and financials.
III	Recruitment/Applicant Tracking to Human Resources Integration <ul style="list-style-type: none"> Associate job announcement/recruitment with requisition status; incorporate job application and submission; track applicants, status, EEO information, generate required correspondence; and update hire information and transfer into HR.

The implementation strategy addresses the Commonwealth's most critical integration need by first focusing on the integration of HR and Payroll.

As noted in Exhibit 4-7, the initial stage will focus on establishing the core HR functions such as the establishment of the base employee record, and the associated fundamental HR components such as establishment of the employee position through position management with the appropriate alignment with budget and position control, of benefits, compensation, and leave management. Core payroll functions will include the establishment of the employee pay profile that would include setting up deductions to account for tax withholdings and benefits, and the alignment of the financial interfaces to internal and external parties. The next major integration point is the time collection and labor distribution segment and ensuring the proper integration to leave management, financial accounting, and payroll. And finally, a recruitment module will focus on applicant tracking, and candidate selection and hire, incorporating the hire process into the integrated HRM system.

4.3.2 Organizational Approach or Service Delivery Model

The service delivery model that Team CGI-AMS proposes will continue to provide agencies with the same degree of independence and flexibility without the manual effort and workarounds that currently exist.

We envision a combined HR/Payroll Enterprise Applications Service Bureau for agencies that want to continue using an HR/Payroll Service Bureau.

Shared HR/Payroll Enterprise Applications Service Bureau. Team CGI-AMS recognizes that there are agencies who will want the same centralized HR and payroll service delivery method that they are currently receiving. A shared HR/Payroll Enterprise Applications Service Bureau will combine the two current and separate service bureaus into a one-stop service center for all HR and payroll needs. Thus, if an agency chooses to continue using a service center processing model for their HR and payroll processing or if they elect to process their own transactions within their agency they may do so. In addition, the Service Bureau will process agency human resources and payroll transactions that may fall outside an agency's area of audit and control and will provide functional end-user assistance to agencies. Other service bureau support activities could include coordination and tracking transactions associated with the Virginia Sickness and

Disability Program (VSDP) or other programs that the Commonwealth would deem appropriate to the service bureau.

As stated above, for agencies that currently use a service bureau organization, the process will be very much the same as it now. Those using both the HR and Payroll Service Bureaus will continue this process model; however, rather than transactions having to be processed by two separate organizations into two separate systems, the transactions will be processed in one place, into one system, and by one organization.

For agencies using only the Payroll Service Bureau, the effect on their process will be that they will no longer be utilizing the services of the DOA Payroll Service Bureau, as the HR processing they perform within their agency will drive the payroll output. Any changes to an employee's pay outside of an HR transaction will be performed by the HR/Payroll Enterprise Applications Service Bureau.

For agencies that currently process their own transactions into both systems, the change will be that they enter into only one system instead of two systems. The double data entry will no longer be required. As noted above, any changes to an employee's pay outside of an HR transaction will be performed by the HR/Payroll Enterprise Applications Service Bureau.

To ensure separation of duties and roles related to HR and Payroll, an integrated solution will provide for system operator classes to be established that can limit operator access to different sections of the system. In addition, since most payroll transactions are a result of an HR transaction, agencies continuing to process their HR transactions internally will have limited, if any, access to an employee's payroll record. All payroll changes, such as W-4s, can either be managed by an agency by establishing the proper separation duties by system operator classes, or these types of transactions can be performed by the HR/Payroll Enterprise Applications Service Bureau, until employee self-service is established.

Team CGI-AMS will work with the Commonwealth to establish a combined service bureau for human resources and payroll processing issues, as shown in Exhibit 4-8. The bureau will be staffed initially by both contractor and Commonwealth employees and will eventually be transitioned completely to Commonwealth personnel.

Exhibit 4-8 Organizational Approach

Current Process Model	Proposed Process Model
Full HR services provided by DHRM Service Bureau	HR and payroll services will be provided by the HR/Payroll Enterprise Applications Service Bureau on the integrated HR/Payroll system.
Full Payroll services provided by DOA's Payroll Service Bureau (PSB)	HR Activities such as recruitment services, studies, reports, program evaluations, communications, and training will continue to be administered by DHRM's Human Resources Service Bureau.
Agency manages its own HR functions and processing	Agency continues to manage its own HR functions and processing. As a result of the integration of HR and Payroll functions into one system, HR transactions affecting pay will be initiated by the HR process. Pay
Full Payroll services provided by DOA's	

Current Process Model	Proposed Process Model
PSB	transactions outside of an HR transaction will be processed by the HR/Payroll Enterprise Applications Service Bureau
Agency manages its own HR functions and processing	Agency continues to manage its own HR functions and will process transactions into the integrated HR/Payroll system. As a result of the integration of HR and payroll functions into one system, HR transactions affecting pay will be initiated by the HR process. Pay transactions outside of an HR transaction will be processed by the HR/Payroll Enterprise Applications Service Bureau.
Agency manages its own payroll services and processing	

Team CGI-AMS proposes that an Enterprise Applications Center of Excellence maintain the human resource management application for the Commonwealth, as described in Chapter 8. This organization will provide both functional and technical support including user support, application upgrades, patches, report development, ad hoc reporting issues, and third-party system interfaces.

4.3.3 Systems Approach

The software application structure will be a web-based solution providing improved overall functionality based on a COTS solution. The Team CGI-AMS solution will establish its viability for the Commonwealth with a phased and properly scaled implementation that meets the unique needs of the Commonwealth.

The Team CGI-AMS solution provides a creative and practical approach to implementing a fully integrated HRM system to the Commonwealth. Our implementation model focuses on establishing a strong and flexible foundation by establishing the critical support organization and the core HR and payroll system functionality in the first stage.

The implementation strategy focuses on addressing the most critical integration need of the Commonwealth's current HR and Payroll systems, by first focusing on the integration of these two primary systems. The benefit will be immediate. Agencies currently performing double data entry will be reducing their workload in this area by half, by having a single data entry point instead of two.

Other immediate benefits will be the elimination of the system reconciliation issues that consume an agency's resources. In addition, the Team CGI-AMS model still provides an optional service bureau solution for agencies that currently use these services. Those currently using only the Payroll Service Bureau will find that since the two systems are now integrated, the requirement for payroll processing will be eliminated or reduced, since the processing of HR transactions will drive the majority of payroll changes.

Phase planning. Through Due Diligence, Team CGI-AMS found that the human resources and payroll requirements for agencies vary greatly, depending on the size and complexity of the organization and its business requirements. Team CGI-AMS found that agencies can generally be divided into two categories for purposes of planning the implementation planning, as shown in Exhibit 4-9.

Exhibit 4-9 Complexity Categories of Commonwealth Agencies

Category	Characteristics	Agency Examples
1	<ul style="list-style-type: none"> Employee population generally <200 with most or all classified employees (pay not directly tied to daily time reporting) Agency funding is directly tied to the Commonwealth budget Agency employment levels are fairly stable, with no significant seasonal hiring spikes Generally geographically centralized offices Minimum to moderate recruitment efforts Minimum to moderate decentralized human resources and payroll activities and/or use fee-based Commonwealth service bureaus for their human resources and payroll processing needs 	<ul style="list-style-type: none"> Department of Fire Programs Department of Rail and Public Transportation Department of Housing and Community Development Virginia Information Technologies Agency The Library of Virginia Department of Employee Dispute Resolution
2	<ul style="list-style-type: none"> Employee population generally >200 with a combination of classified employees and wage employees (pay directly tied to hourly/daily time reporting) Significant portion of agency funding is predicated on grants and/or combined funding sources that require close tracking of employee hours worked and associated program audit trails Impacted by seasonal employment activities, such as snow removal, summer hire programs, etc. Geographically dispersed offices and employees Significant recruitment activities Complex decentralized human resources, payroll, and timekeeping activities and/or systems 	<ul style="list-style-type: none"> Department of Corrections Virginia State Police Department of Transportation Department of Environmental Quality Department of Social Services Department of Mental Health, Mental Retardation and Substance Abuse Services Department of Health Virginia Employment Commission

In addition, to incorporating the diverse agency makeup into our implementation strategy, we also are recommending implementing the HRM solution in three stages, a strategy that recognizes the importance of integrating the core HR and payroll functionality with a measured approach as summarized in Exhibit 4-10 and described following.

Exhibit 4-10 Recommended HRM Implementation Components

Stage	Purpose and benefits
I	<ul style="list-style-type: none"> Implement basic human resources and payroll functionality for Category 1 agencies to prove the viability of the selected integrated solution To facilitate a quicker Stage II deployment, model the time and labor distribution functionality with a Category 2 agency Establish a shared service bureau for HR/payroll functional processing support
II	<ul style="list-style-type: none"> Implement solution for all remaining Category 2 agencies with the inclusion of time and labor distribution as required by agencies

Stage	Purpose and benefits
	<ul style="list-style-type: none"> Initiate the employee self-service function Build upon the initial implementation.
III	<ul style="list-style-type: none"> Expand the solution to other organizations and agencies to be identified by the Commonwealth. Implement recruitment and applicant tracking functionality. Explore adding additional system functionality, such as electronic workflows, performance management, workforce management, learning management, and expanded employee and manager self-service.

Other proposed services that support a quality service delivery model will be considered, such as, a centralized Virginia Sickness and Disability Program (VSDP) Service Bureau.

- Stage I.** To prove the viability of the selected integrated solution, the recommendation is to implement basic human resources and payroll functionality for Category 1 agencies, as shown in Exhibit 4-11.
 As part of the Stage I implementation, Team CGI-AMS proposes the establishment of an HR/Payroll Enterprise Service Bureau, as summarized in Exhibit 4-12. The Service Bureau will continue to provide HR transaction processing for agencies in need of this level of service and will process payroll transactions that may fall outside normal processing, such as pay adjustments that are not part of system generated transactions.
 Many Stage I agencies are currently using the fee-based HR and Payroll Service Bureaus for their human resources and payroll activities. These agencies have relatively straightforward requirements, basic HR/payroll service delivery models, and smaller employee populations. Given that many of these agencies are already using in-house “service bureaus” to perform their human resources and payroll functions, the transition to an HR/Payroll Enterprise Service Bureau model will be consistent with their current business practice. It is envisioned that these agencies will forward the HR and payroll processing transactions to the HR/Payroll Enterprise Service Bureau or have the option of shifting to direct entry from their agency, while other HR functions such as recruitment, management, and employee services will continue to be managed and serviced by DHRM.
 Category 1 agencies currently only using the Payroll Service Bureau will reduce or eliminate the need for this service, as the integration of the human resources and payroll system will only require the single data entry point that they currently perform. Any payroll adjustment falling outside the agencies’ ability to adjust will be processed by the HR/Payroll Enterprise Service Bureau.
 Agencies currently processing in both the human resources system and the payroll system will immediately reduce their data entry by half, as a single data entry point for transactions will eliminate the need to reenter the transaction into the payroll system.

Exhibit 4-11 Stage I – Core HR and Payroll Functionality and Category 2 Agency with Time and Labor Distribution

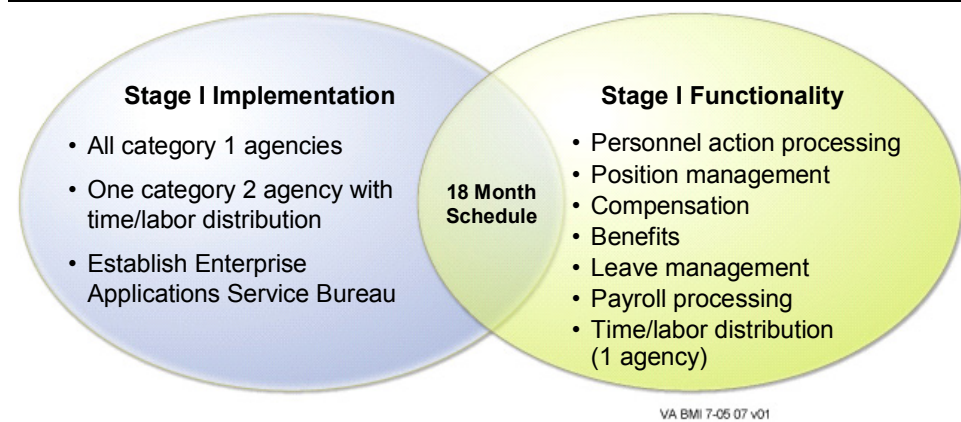
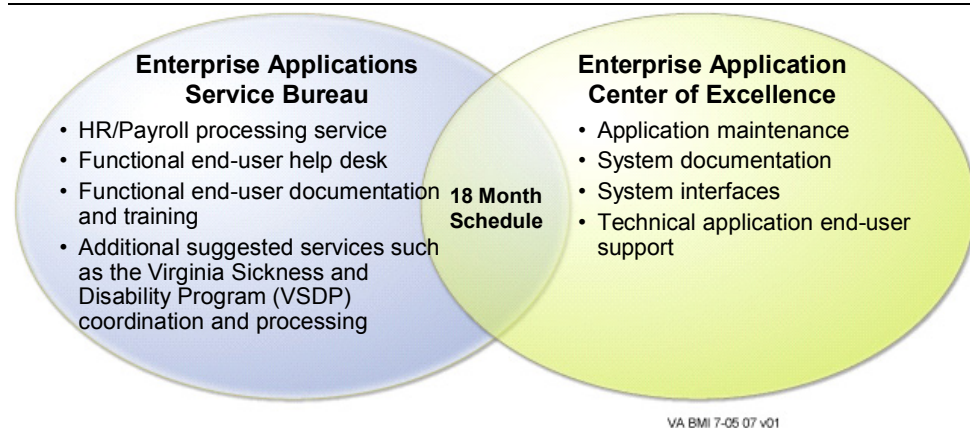


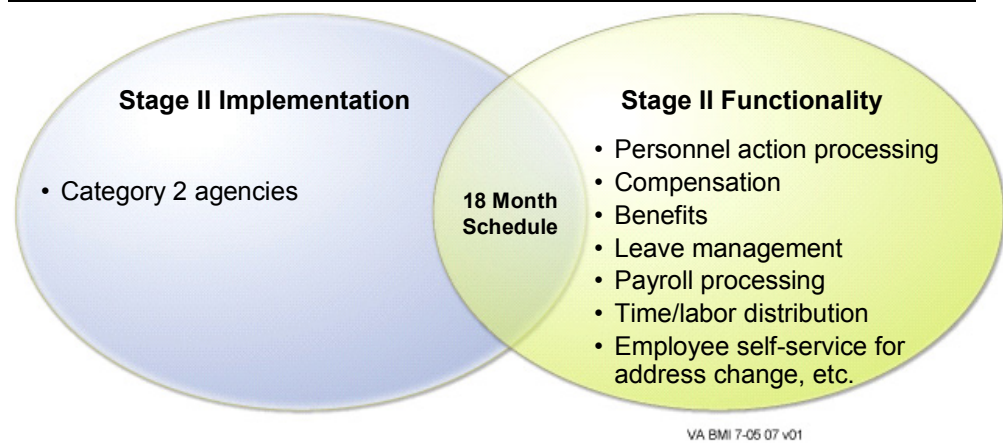
Exhibit 4-12 Stage I - Establish Shared HR/Payroll Service Bureau



An application maintenance support organization will provide the technical application support to the Commonwealth by providing system maintenance, upgrades, patches, report development, ad hoc reporting development, help desk functions, end-user documentation, and building and supporting third-party interfaces, as described in Chapter 7 – Application Management.

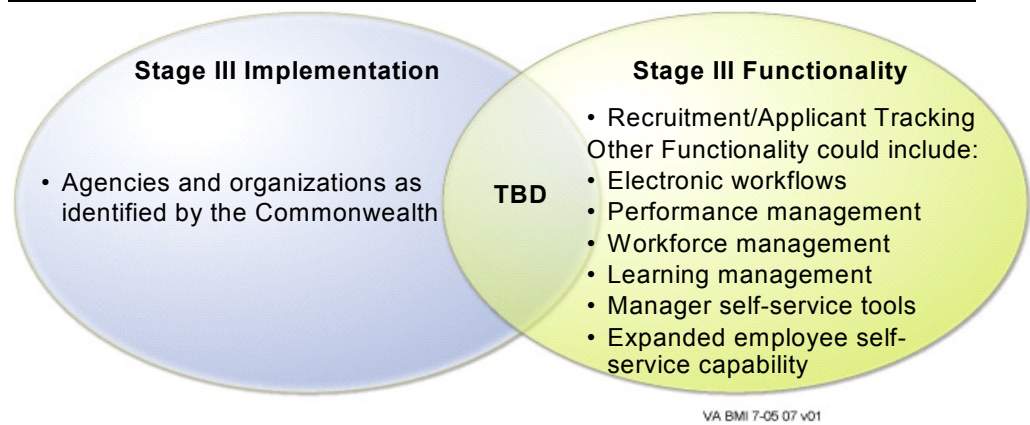
Stage II. The goal of the second stage is to build upon the initial implementation. Team CGI-AMS plans to initiate the Stage II implementation Six months prior to the Stage I Go-live date. As Exhibit 4-13 shows, the Stage II implementation schedule is also estimated to be an 18 month period. Remaining executive agencies will be included in this stage.

Exhibit 4-13 Stage II - Category 2 Agencies - Time/Labor Distribution



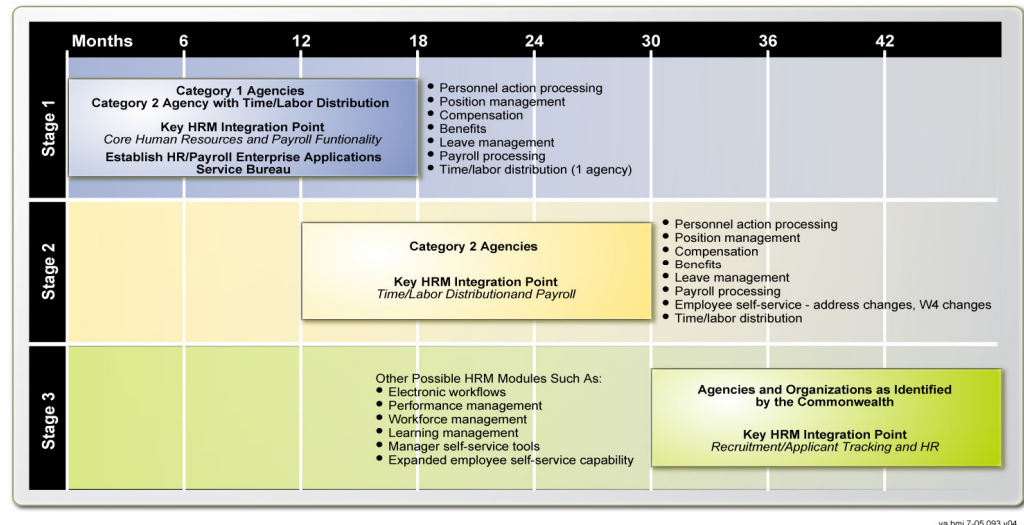
Stage III. As shown in Exhibit 4-14, Team CGI-AMS will expand the integrated human resources and payroll system to agencies and organizations as identified by the Commonwealth. Team CGI-AMS will implement recruitment and applicant tracking and explore the implementation of other available functionality such as electronic workflows, performance management, workforce planning, learning management, and expanded manager and employee self-service.

Exhibit 4-14 Stage III Recruitment and Applicant Tracking



The following Exhibit 4-15 presents the combined phased implementation and phased-in functionality that is proposed for the Commonwealth.

Exhibit 4-15 Staged HRM Implementation and Functionality



4.3.4 Transition or Implementation Path

Team CGI-AMS intends to implement Category 1 agencies with core HR and payroll functionality, model the Time and Labor distribution module with one Category 2 agency, and establish the HR/Payroll Enterprise Service Bureau. Exhibit 4-16 summarizes these short-term opportunities.

Exhibit 4-16 HRM Short-Term Opportunities

Short-Term Opportunities	Description
<ul style="list-style-type: none"> Category 1 Agencies – Human Resources, Payroll, Leave Management One Category 2 Agency – Same as above and establish Time and Labor distribution module Establish shared HR/Payroll Enterprise Applications Service Bureau 	<p>Within the first 18 months, Team CGI-AMS will complete Stage I of its HRMS implementation. Within this stage Team CGI-AMS will set the foundation for the overall Commonwealth implementation and transition to an integrated HR/Payroll system. Included in the Stage I activities will be the implementation of Category 1 agencies and the initial setup work for the Time and Labor distribution segment, the establishment of a shared HR/Payroll Enterprise Applications Service Bureau, and an Enterprise Applications Center of Excellence that will provide the technical support for the selected application.</p> <p>During the first 24 months, Team CGI-AMS will also be initiating Stage II of the HRMS implementation. This portion of the overall HRMS implementation will focus on the agencies with more complex HRMS implementation issues.</p>

Long-term opportunities, shown in Exhibit 4-17, will focus on implementing the remaining agencies and expanding the self-service functionality.

Exhibit 4-17 HRM Long-Term Opportunities

Long-term Opportunities	Description
<ul style="list-style-type: none"> Category 2 Agencies – Human Resources, Payroll, Leave Management, and Time and Labor Distribution Select and implement additional functionality such as a Recruitment and Applicant Tracking module Add other agencies and organizations such as determined by the Commonwealth. As feasible and as legal statutes permit, implement Legislative and Judicial Commonwealth government branches. 	<p>Implementation of Category 2 agencies. This portion of the overall HRMS implementation will focus on the agencies with more complex HRMS implementation issues. Other organizations and agencies we will assess for implementation are colleges and universities, and Legislative and Judicial Branches. Team CGI-AMS will also assess with the Commonwealth what other HRM modules can be implemented.</p>

Disposition of approved applications currently in development or implementation. During the Due Diligence survey there were several new applications or application upgrades that were in development or in the process of being deployed. Within the HRM survey area the following applications were noted.

- DHRM** – An RFP was issued on June 23, 2005 for an online, web-based Recruitment Management System (RMS) that will integrate all phases of the employment process, from the initial job requisition to the demographics of the applicant selected for employment. The major components of the RFP are these:
 - The Job Requisition, which includes the creation and advertisement of a job announcement, to include capturing recruitment costs and where the position was posted
 - Online Employment Application
 - Applicant Tracking
 - EEO Reporting.
- DOF** – This agency is currently in the process of implementing a new custom web-based tracking system. The system will track agency work time, etc. It will be an integrated system which will allow review of an employee's daily work activities and overall work load. Employees also will be able to enter their own time electronically. The regional office will review the data entered prior to final submission. This system will improve the agency's overall tracking system and assist the agency to better manage its workforce.
- DOA** – DOA initiated an effort with DHRM to utilize the transaction log to automatically update CIPPS with changes made in PMIS for those limited data elements shared between the two systems. This automation should be completed in the fall of 2005.
- DEQ** – Oracle Time/Labor project in progress. Scheduled completion date is September 2005, with an estimated project cost of \$50,000.

- **DMV** – Time and attendance system. Scheduled completion date is November 1, 2005, with an estimated project cost of \$75,000.

Our proposed approach recognizes the decentralized nature of Commonwealth operations and offers a phasing strategy and flexible system architecture to address it. Thus, our proposal does not depend on the completion of any active project nor does it require any project to be terminated. Rather, we will assist the Commonwealth in assessing the cost/benefit and schedule of any such project in light of this partnership effort, and the Commonwealth will determine the appropriate disposition for each one.⁵

4.3.5 Linkage to the Virginia Enterprise Applications Architecture

Team CGI-AMS recognizes that the impact of human resource costs on government organizations demands an integrated solution, not a simple interface.

Financial management. Our solution will integrate with the proposed financial management and budget solution (Chapter 3) for the management of positions within the HR and Payroll environment. Control empowers public sector organizations to plan, create, and track positions in accordance with authorized appropriations, draw authorities, or other funding sources; our solution will provide the information necessary for comprehensive staff planning, human resource budgeting, and position monitoring and analysis. Information tracked will include:

- Job title and code
- Position description and status
- Position characteristics, such as permanent or temporary status
- Job grouping and classification information
- Minimum and maximum salary information
- Actual costs by position
- Standard labor distribution data
- Position-specific overrides such as those for pay, leave, and deduction policies
- FLSA status
- Budgeted and actual FTEs for each position.

Business intelligence. Another integral product of the Virginia Enterprise Applications Architecture and the Human Resource Management System implementation will be establishment of a comprehensive data repository with reporting and analysis capability (see Chapter 8 for our proposed Business Intelligence solution). Capturing the Commonwealth's workforce related data into one database will enable monitoring of the workforce, decision making, and analysis providing quick and easy answers to workforce management questions. It is envisioned that this repository will include:

- Providing Commonwealth workforce information from disparate data sources

⁵ We reviewed the list of ITIB approved projects and believe that this approach will accommodate agency-level projects.

- Providing a single, accurate source for all workforce reporting
- Providing the Commonwealth with a view of the workforce to support initiatives and tools to improve the precision of analysis, to develop budget strategies, and to devise plans in anticipation of events
- Enabling workforce information to be extracted and/or disseminated real time by a broad set of legitimate users to decrease redundant records and systems and to provide access that does not necessitate programming support.

Enterprise Applications Center of Excellence. As previously referenced, the Enterprise Applications Center of Excellence will provide the technical application support to the Commonwealth by providing system maintenance, upgrades, patches, report development, ad hoc reporting development, help desk functions, end-user documentation, and building and supporting third-party interfaces. This maintenance organization will coordinate the HRM enterprise application with the other core enterprise components and functions that support single window government, financial management, supply chain management, and administrative management. Please see Chapter 7 for a discussion of the proposed Enterprise Applications Center of Excellence.

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